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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/597,345

Applicant(s)

JARVENKYLA, JYRI

Examiner

ERIK KASHNIKOV

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 73-88,90-124 and 126 is/are pending in the application.
- 4a) Of the above claim(s) 109-123 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 73-88,90-124 and 126 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on a PCT application filed on 01/20/2005. It is noted, however, that applicant has not filed a certified copy of the PCT documents as required by 35 U.S.C. 119(b).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 74-75 and 85-87 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 31-35 and 37 of

copending Application No. 11/458,927. Although the conflicting claims are not identical, they are not patentably distinct from each other because the difference between the claims is that the instant application requires a contoured metal outer layer whereas the copending application only requires a metal layer, however, a contoured metal, as defined by applicant's is a layer conformed to fit a regular geometric curve in the axial direction. It would be obvious to one of ordinary skill in the art at the time of the invention that any layer of a pipe would be conformed as to fit a regular geometric curve in the axial direction of the pipe.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 73, 76, 77, 85-88, 90, 91 and 94 are rejected under 35 U.S.C. 102(b) as being anticipated by Eastham et al. (US 6,131,614).

5. In regards to claims 76 and 77 Eastham et al. teach that the plastic may be polyethylene (column 2 lines 1-3).

6. In regards to claim 85 Eastham et al. teach that the outer layer comprises steel or aluminum (column 2 lines 15-20).

7. In regards to claim 86 Eastham et al. teach that sputtering may be used to deposit the metal layer (column 1 lines 59-61).
8. In regards to claim 87 Eastham et al. teach that while an adhesion promoting coating may be used it is not required, and in such instances the metal would be directly bonded to the plastic (column 2 lines 4-8).
9. In regards to claim 88 as the thickness disclosed in Eastham et al. is within Applicant's range it would inherently have all the properties described therein.
10. In regards to claim 91 the pipe of Eastham et al. shows corrugated convolutions in Figure 1.
11. In regards to claim 94 Eastham et al. teach that the surface of the metal layer be treated with a lacquer, a glassy layer which would increase the wetting behavior of the metal layer (column 2 lines 25-35).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 73, 75-77, 85-88, 90, 91, 108, 124, 126 and 127 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614).

14. In regards to claims 73 and 85 Hansen et al. teach a pipe which comprises an inner thermoplastic layer and a layer outside the thermoplastic layer which comprises a metal (claim 1). Hansen et al. teaches that the metal layer comprise aluminum (claim 11). Hansen et al. teach that the metal barrier is an oxygen barrier layer as well (paragraph 0043).

15. In regards to claim 75 Hansen teaches an embodiment wherein there is an additional outer layer which is on the opposite side of the metal layer and comprises a plastic (claim 8).

16. In regards to claims 76 and 77, Hansen et al. teach an embodiment wherein the inner layer is a polyolefin, specifically a cross linked polyethylene (claim 4).

17. In regards to claim 86, Examiner is treating it as a product by process claim, specifically regarding the term "formed by a method selected from the group consisting of...". It has been shown that even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (MPEP 2113 and *In re Thorpe*, 777F.2d 695, 698, 227 USPQ 964, 966). As such the metal layer attached to an inner layer of plastic as disclosed above meets the limitations of claim 86 as well.

18. In regards to claim 87 Hansen et al. teach 6 embodiments of their invention without a bonding agent between the metal and plastic layer (claim 6), and one such embodiment (claim 7 which has a layer between the metal and plastic layers (claim 7).

19. In regards to claim 88 as the metal layer is made of the same material and is in the same position as that presently claimed it would inherently impede diffusion of stabilizers and other additives out from the inner thermoplastic layer as presently claimed.

20. In regards to claim 108 Hansen et al. teach an embodiment wherein the outer layer is cross linked polyethylene (claim 17).

21. In regards to claims 124, 126 and 127 as Hansen et al. teach the same materials in the same formation as presently claimed the respective E-modulus of the given layers would inherently be the same. Hansen et al. teach that the pipe is capable of axial deformation (claim 1)

22. As stated above Hansen et al. teach a multilayer pipe comprising an inner polyolefin layer and a metallic layer outside said polyolefin layer however they are silent regarding the thickness of said metal layer, and specific embodiments wherein the metal layer is seamless.

23. It is pointed out that Hansen et al. teach that the metal layer should be as thin as possible.

24. In regards to claims 73 and 90 Eastham et al. teach a hose (which one of ordinary skill in the art would recognize is a synonym of a pipe) which comprises an inner layer of a plastic and an outer layer of a metal deposited thereon (column 1 lines

45-51). One of ordinary skill in the art would recognize that vacuum deposited layers leave no seem. Eastham et al. teach that these layers are 0.05-5 micrometers in thickness (column 2 lines 44-45).

25. In regards to claim 91 the pipe of Eastham et al. shows corrugated convolutions in Figure 1.

26. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen et al. with that of Eastham et al. because the invention of Eastham et al. offers improved cost of production by limiting the amount of metal to a minimum as well as increased heat protection for inside the pipe (column 1 lines 40-66).

27. Claim 92 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614) and Guest. (EP 0 793 045).

28. As stated above Hansen and Eastham et al. teach a multilayer pipe with a thermoplastic inner and outer layer that has corrugations, however they are silent with regards to sinusoidal corrugations

29. In regards to claim 92 Claussen et al. teach a multilayer pipe comprised of an inner plastic layer, an intermediate corrugated metal layer (reference number 10 in Figure 1), and an outer layer (claim 1). It is apparent from figure 1 that the corrugations are in a sinusoidal pattern.

30. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen and Eastham et al. with that of Guest because the

invention of Guest offers the ability the internal convolution to form optimal properties including stiffness (column 2 lines 22-27).

31. Claims 74, 78-80 and 82-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614) and Schmitz et al. (US 2002/0082352).

32. As stated above Hansen et al. and Eastham et al. teach a multilayer pipe comprising an inner polyolefin layer and a metallic layer outside said polyolefin layer however they are silent regarding the polar functional constituent of the inner layer.

33. In regards to Claims 74, 78, 79, and 80 Schmitz et al. teach a plastic pipe (paragraph 0096). Schmitz et al. teach that the pipe is three layers and that the first layer comprises a polyolefin (claim 1). Schmitz et al. teach that the inner layer can comprise a polypropylene or a polyethylene (paragraph 0052). Schmitz teaches that the polyolefin layer may be combined (grafted) with maleic anhydride modified EPM to form a polar functional polyolefin (paragraph 0052 and 0086). Schmitz et al. teach that fillers may be added to the layers (paragraph 0087). These embodiments meet sections (i) and (iii) of Applicant's claim 1. As these materials are the same as Applicant's they would intrinsically be extrudable. In regards to the polar stabilizer, Schmitz et al. teach the inclusion of UV stabilizers, which Applicant's include in a list of their polar stabilizers (paragraph 0087).

34. In regards to claims 82 and 83 Schmitz et al. teach that the olefin polymer with the functional group can be combined with an olefin polymer without a functional group (paragraphs 0035-0041). In regards to the limitation that polyolefin is a non crystalline polyolefin, Schmitz et al. teach that the non polar polyolefin may be polyethylene or polypropylene, as polyethylene is the same material presently claimed, it would intrinsically be non crystalline (paragraph 0052).

35. In regards to claim 84 Schmitz et al. teach it is in principle possible to use any type of polyolefin in this layer (paragraph 0052) which would include the cross linked polyethylene preferred by Hansen et al. as stated above.

36. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen et al. and Eastham et al. with that of Schmitz et al. because the invention of Schmitz et al. would offer adhesion between layers which remains intact even after prolonged exposure to aqueous matter of elevated temperatures (paragraph 0010).

37. Claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614) and Schmitz et al. (US 2002/0082352) as applied to claim 80 and in further view of Hibino (JP 59155010).

38. As stated above Hansen et al. Eastham et al. and Schmitz et al. teach a multilayer pipe with an inner layer comprising a polar functional polyethylene, however they are silent regarding the polar functional polyethylene being ethylene/glycidyl methacrylate.

39. Hibino et al. teach that it is known in the art at the time of the invention for inner layers of pipes used to convey water to have an inner layer which comprises ethylene/glycidyl methacrylate (ABS).

40. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen et al. Eastham et al. and Schmitz et al. with that of Hibino because the invention of Hibino offers the ability to seal joints completely without rupture of the lining tube (ABS).

41. Claim 93 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614) and Guest. (EP 0 793 045).

42. As stated above Hansen et al. Eastham et al. and Guest teaches a multilayer pipe with a corrugated inner and intermediate layer, wherein the intermediate layer is a metal and the inner layer is a plastic, however they are silent regarding adding functional groups to the inner layer to increase the wetting of the deposited metallic layer.

43. Murase teaches multilayer coatings for pipes (column 10 lines 1-5).

44. In regards to claim 93 Murase teaches that it is known to add an onium compound to a plastic layer to increase its wetting to a metal layer (column 3 lines 29-50).

45. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen et al. Eastham et al. and Guest with that of Murase

because the invention of Murase offers increased wetting to a metal layer and increased ease in the formation of multilayer coated films (column 3 lines 29-50).

46. Claim 93 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614) and Murase (US 4,305,994).

47. As stated above Hansen et al. and Eastham et al. teach a multilayer pipe with a thermoplastic inner and an outer layer, wherein the outer layer is a metal and the inner layer is a plastic, however they are silent regarding adding functional groups to the inner layer to increase the wetting of the deposited metallic layer.

48. Murase teaches multilayer coatings for pipes (column 10 lines 1-5).

49. In regards to claim 93 Murase teaches that it is known to add an onium compound to a plastic layer to increase its wetting to a metal layer (column 3 lines 29-50).

50. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen et al. with that of Murase because the invention of Murase offers increased wetting to a metal layer and increased ease in the formation of multilayer coated films (column 3 lines 29-50).

51. Claim 94 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614) and Babb et al. (US 5,730,922).

52. As stated above Hansen et al. and Hansen et al. teach multilayer pipes with functionalized polyolefins and an outer metal barrier layer, however they are silent regarding treating the outer barrier layer.

53. Babb et al. teach metal plastic compositions bond to each other.

54. In regards to claims 37-41 Babb et al. teach treating the surface of the metal with a plasma treatment, as well as a solvent treatment (solvent cleaning) (column 13 line 45 column 14 line 14).

55. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen et al. and Eastham et al. with that of Babb et al. because the invention of Babb et al. promotes better adhesion between the plastic and metal layers (column 13 lines 45-46).

56. Claims 95 and 96 rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al (US 2002/0007861) in view of Eastham et al. (US 6,131,614), Schmitz et al. (US 2002/0082352) and Matteodo (US 5,132,344).

57. As stated above Hansen et al. Eastham et al. and Schmitz et al. teach multilayer pipes with functionalized polyolefins and an UV stabilizer however they are silent regarding specific UV stabilizers.

58. Matteodo teaches that sterically hindered amines are good UV stabilizers for polyethylene compositions (column 4 lines 40-43). And that these polyethylenes are good for pipe manufacture (column 5 lines 27-31).

59. In regards to claim 96 as the color, resistance to coloration effects, and stability of the pipe are variable(s) that can be modified, among others, by adjusting said thickness of the metal layer (col.4, lines 28-42), the thickness of the metal layer would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed thickness cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the thickness of the metal layer in Hansen et al. to obtain the desired balance between color, resistance to coloration effects, and stability (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

60. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen et al. Eastham et al. and Schmitz with that of Matteodo because the invention of Matteodo offers improved color and resistance to coloration effects (column 4 lines 29-35).

61. Claims 97-100 and 102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614), Schmitz et al. (US 2002/0082352) and Bush et al. (US 5,416,142).
62. As stated above Hansen et al. Eastham et al. and Schmitz et al. teach multilayer pipes with functionalized polyolefins and fillers they are silent regarding the types of fillers as well as their physical properties.
63. Bush et al. teach compositions for binding thermoplastic polymers (column 1 lines 19-25).
64. In regards to claim 97, 98 and 102 Bush et al. teach common fillers for these compositions are Talc, mica and calcium carbonate (column 14 lines 34-38).
65. In regards to claim 100 Bush et al. teach that the filler is present in amounts from 0-5% (column 14 line 18).
66. Also in regard to claims 99 Bush et al. teach that the particle size should be less than about 50 microns (column 14 lines 27-30).
67. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen et al. Eastham et al. and Schmitz with that of Bush et al. because Bush et al. offers a reduced cost and improved structural strength (column 14 lines 24-26).
68. Claims 101 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al (US 2002/0007861) in view of Eastham et al. (US 6,131,614), Schmitz et al. (US 2002/0082352) and Kawahara et al. (US 4,454,258).

69. As stated above Hansen et al. Eastham et al. and Schmitz et al. teach multilayer pipes with an inner layer comprising thermoplastics, fillers and polar functional groups, however they are silent regarding the use of fillers which have been coated with polar functional groups.

70. In regards to claim 101 Kawahara et al. teach thermoplastic compositions for use in dentistry. Kawahara et al. teach it is known to include polar coated inorganic fillers in a non polar thermoplastic material (claims 11 and 12).

71. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Eastham et al. Schmitz et al. and Hansen et al. with that of Kawahara et al. because the invention of Schmitz et al. which offers prolonged adhesion even after contact with alcohol or aqueous media at elevated temperatures (paragraph 0010) would benefit from the intensified bonding properties offered by the invention of Kawahara et al. (column 5 lines 47-51).

72. Claims 103-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614), Schmitz et al. (US 2002/0082352) and Alexandre et al. (US 6,465,543).

73. As stated above Hansen et al. Eastham et al. and Schmitz et al. teach multilayer pipes with functionalized polyolefins and fillers they are silent regarding the types of fillers.

74. In regards to claim 103 Alexandre et al. teach polyolefins mixed with nanofillers (column 1 lines 63-67).

75. In regards to claim 104 Alexandre teaches using 1-10 vol% of nanofiller (column 3 lines 51-55).

76. In regards to claim 105 Alexandre et al. teach that the fillers are uniformly dispersed within the polymer (column 4 lines 50-55).

77. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Hansen et al. Eastham et al. and Schmitz et al. with that of Alexandre et al. because the invention of Alexandre et al. offers polyolefins with enhanced physical properties (column 2 lines 40-45).

78. Claims 106-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. (US 2002/0007861) in view of Eastham et al. (US 6,131,614), Schmitz et al. (US 2002/0082352) and Colburn (US 3,721,597).

79. As stated above Schmitz et al. Eastham et al. and Hansen et al. teach multilayer pipes with functionalized polyolefins and metal barrier layers but they are silent regarding the adhesive between the layers.

80. In regards to claim 106 Colburn teaches an adhesive layer which is between a metal layer and a thermoplastic layer (column 2, lines 38-45).

81. In regards to claims 107 Colburn teaches that the adhesive partially comprise unsaturated carboxylic acids (column 5 lines 24-26).

82. One of ordinary skill in the art at the time of the invention would be motivated to modify the inventions of Eastham et al. Schmitz et al. and Hansen et al. with that of Colburn because the invention of Colburn offers a strong bond (column 1 lines 15-20).

Response to Arguments

83. Applicant's arguments, see arguments, filed 05/29/09, with respect to the 35 U.S.C. 101 and 112 2nd paragraph rejections have been fully considered and are persuasive. The 101 and 112 rejections of the claims have been withdrawn.

84. Examiner noted that the double patenting rejections will be held in abeyance for the time being.

85. Applicant's arguments with respect to the previous 102 rejections have been considered but are moot in view of the new ground(s) of rejection.

86. In regards to Applicants arguments regarding the welding of Hansen et al. Examiner points out that it is not required that the metal layer of Hansen et al. is welded, it is only one embodiment. It is further pointed out that "nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims." In re Nehrenberg, 280 F.2d 161, 126 USPQ 383 (CCPA 1960). The thin layer of Eastham et al. is present for the same reasons as the layer of Hansen et al. and one of ordinary skill in the art would be motivated to use it for the reasons stated in the above rejection.

87. In regards to Applicant's arguments regarding the Guest reference, while it is noted that the metal layer in guest is used to optimize thickness, this metal layer is still required to bend, and as further pointed out in the guest reference is intended to be a thin layer as well (column 2 lines 29-32). Further it is pointed out that Guest is a teaching reference and is being used to teach that in pipes which can be bent it is

known in the art to use sinusoidal convolutions to optimize the mechanical properties, of which stiffness is only one example.

88. Examiner notes that while the Eastham, Guest, Schmitz, Murase, Babb, Matteodo, Bush, Kawahara, Hibino, Alexandre and Colburn references do not disclose all the features of the present claimed invention, they are used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

89. In regards to Applicant's arguments regarding the Murase reference, while the primary reference is silent with the use of a pretreatment layer, one would still be motivated to apply one for the reasons set forth in the rejection above. Further the claim language requires that the polymer matrix be provided with wetting compounds, and the Murase reference provides the surface of said polymer with the wetting compounds.

90. In regards to Applicant's arguments regarding the Babb reference, while the primary reference is silent with the use of a pretreatment layer, one would still be motivated to apply one for the reasons set forth in the rejection above.

91. In response to applicant's argument that Bush et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the reference is reasonably pertinent to the particular problem with which Applicant was concerned, specifically binding polymers, and increasing their effectiveness.

92. In response to applicant's argument that Kawahara et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the reference is reasonably pertinent to the particular problem with which Applicant was concerned, specifically increasing the effectiveness of binding compounds by ensuring the improved physical properties of the specific filler used.

93. In response to applicant's argument that Alexandre and Colburn are nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Alexandre is reasonably pertinent to a particular problem

with which Applicant was concerned with polymers with increased binding as well as increased physical properties of polymers through use of fillers.

Conclusion

94. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Frechtling et al. (US 3,971,753).

95. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIK KASHNIKOW whose telephone number is

(571)270-3475. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (Second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erik Kashnikov
Examiner
Art Unit 1794

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794